

Seinäjäski University of applied science

THESIS ABSTRACT

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The purpose of this thesis is the subcontracting and its internationalization, description of the process to find subcontractor from China.

The whole thesis will be divided into five chapters; the studying area focuses on the B to B market, and elaborates the international subcontracting in B to B market, its benefits, roles, selection and process.

The first part will from general conceptions of B-to-B, it will include relationship of traditional B-to-B and modern B-to-B development, E-commerce, Chinese B-to-B development; the second part will elaborate the internationalization, not only the international B-to-B, also the subcontracting internationalization and benefit of subcontracting. The third part will focus on the international subcontracting in B-to-B, as the one of foreign operation methods, the process of subcontracting should be included in. The case analysis will base on Ala- Takkari Oy and Yrityskehä oy to describe the international subcontracting roles and process.

The whole thesis focuses on the international subcontracting, then extended to international industrial subcontracting in B-to-B area.

Keyword: international subcontracting, B-to-B market, internationalization

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1 Introduction

This thesis takes a look into the international subcontracting in B-to-B market between Finland and China. The purpose of the whole research is to describe the subcontracting and its internationalization in B-to-B market.

According to the case analysis, thesis's goal is one Finnish company decided to look for a subcontractor from China. So under this background, I would like to utilize the theoretical and practical approach to analyze and research an amount of aspects relating international subcontracting and also B-to-B.

Understand the subcontracting in B-to-B, no doubt the first action we need to know the B-to-B. Therefore, I will begin the thesis from the theory of B-to-B and definition of B-to-B. After the general conception of B-to-B, the basic knowledge of B-to-B can be understand, the next step focuses on the internationalization, mainly is concern to international B-to-B and international subcontracting.

Of course, this thesis's most important part is international subcontracting. Consequently, after the description of B-to-B and internationalization, the international subcontracting in B-to-B will be elaborated. "How to do the subcontracting", "why is subcontracting", its development and situation currently all will be stated in this part. And the research and analysis should be deeply and detailed, I would like to expound "international subcontracting" from every relative aspect.

Two Finnish companies, Ala-Takkari and Yrityskeskä Oy will be as the samples in this thesis to illustrate the international subcontracting for the topic of thesis.

In the multimarket, multicultural environment, the globalization of business should need some media. Certainly, the subcontractor as the most important media and link plays many roles in B-to-B market. According to now economic situation and the development trend, the international subcontracting should be the necessary trend in the future, even currently; the subcontracting has been developed well in many countries of the world.

Of course, because of my experience; I am working in international subcontracting project between Finland and China. Thereby, I will relate to the Chinese B-to-B development and industrial subcontracting to elaborate and express more.

1.1 Goal of thesis

The main goal of this thesis is the international subcontracting, according to this goal, the whole thesis will elaborate the international subcontracting development, history background of international subcontracting; relative with B-to-B market to expound the international subcontracting in B-to-B market development and main roles.

The international B-to-B market as the basis; based on it the subcontracting operation and development will be stated as the goal in this thesis.

Certainly, the international subcontracting will analyze with the case together, and through the cases, the goal can be more protruding.

1.2 Structure of the thesis

In this thesis, I divided it into 5 main parts. The first part, I elaborate the B-to-B market, especially the traditional B-to-B market and modern B-to-B market's relationship and development, make this as the background and basis to

continue to state the internationalization. So the second main part is about the internationalization of business, it will make the whole thesis in international environment; the third part is international subcontracting in B-to-B area, the subcontracting as the main goal of this thesis will be elaborate in this chapter, it will included in subcontracting importance, forms of subcontracting relationship, subcontracting development, benefit of subcontracting, international subcontracting and global supply chain management. Fourth, after the international subcontracting theory statement, the thesis will relative with the case analysis and empirical part. Connect with the theory part and background to analyze the case, and get the conclusion from it. Finally, combine two companies' cases; get the conclusion between theory can empirical parts.

1.3 Introduction of case companies and the problems

In this thesis, there are two companies will appear in the case analysis part. One company is Ala-Talkkari Oy as the customer in the whole subcontracting case, it will relative the reason of subcontracting happened; and another company is Yrityskehä Oy, it will be the subcontracting company in this thesis and analyze the subcontracting development, operation of subcontracting, selection of suppliers and international subcontracting.

Ala-Talkkari Oy is one of most famous heating system manufacturers in Finland. From this year, they have their own plan to outsource some of their casting parts of heating system, and they focus on China casting market. They would like to get the cheaper price and higher quality products from China.

Yrityskehä Oy as one of many subcontracting companies in Finland, it has its own advantages.

- Complete delivers and network management
- Reliability of delivery

- Promptness of delivery
- Uniform, expected quality
- Flexibility
- Overall reliability
- Excellent interpersonal relations
- Long-term customer relations
- Continuous development ensures that every part of the process is implemented efficiently

So combine these all advantages together, Yrityskehä Oy also collect necessary sources and develop itself go to abroad. It not only does business in Finland, also goes to internationalization.

According to two companies' analysis and relative with the target market – Chinese casting market development, through process of the whole international subcontracting, selection of suppliers for Ala-Talkkari Oy, the international subcontracting will be elaborated.

2. Business to Business marketing

Business to business is the selling between companies, wholesale rather than retail. But it means more than that. Efficient use of capital demands small inventories, which entails anticipating demand, and so maintaining detailed information flows between all parties involved in modern complex manufacturing processes. Business to business involves widening the circle of suppliers for safety and competition, and of centralizing control.

Information of all types--- corporate, technical, identity-building --- has to be interchanged across the scattered divisions of large companies, and new ideas fostered, assessed and disseminated. Speed is vital, as are improved communication, collaboration, and customer understanding. All these requirements can be handled by IT, and software has been developed to meet the challenge- customer relationship management, enterprise resource planning, online auction, supply chain management, ect. Little of it is off-the shelf, but is devised as systems to be extended and built round individual company requirements.

B-to-B means that establish the business relationship between two businesses, for example, we just can buy Coca-Cola in McDonald, because they have the cooperation business relationship between these two enterprises. Companies established relationship of business partner, they hope through this thing which all companies submit can form a development opportunity or complementary chance, and share the all profit.

2.1 Traditional B-to-B and modern B-to-B

With technology and economy development, the B-to-B pattern begins to change from traditional to modern. The change shows not only in the style, but also in the technique.

Traditional marketing techniques involving tradeshow, events, direct mail and so on, these are still very prevalent, are heavily used by many companies to market their products and service offering. While online marketing is gaining a much larger share of the marketers' budget – it would be imprudent to ignore the traditional marketing techniques that are still a very powerful means getting marketing messages across to targeted decision makers.

According to the recent study of Interactive marketing priorities for SMBs (Forrester, 2011); Ahar VanBoskirk believes that 54% of marketers will decrease their marketing budget for traditional tactics. While more than half of the marketing budget is now being spent on interactive/digital/online marketing, it is still hard for some companies to actually understand the true value or ROI gained from this medium. The return on investment is approximately measured based on the number of click through form number of page views calculated from certain analytical tools. The modern online form, used by marketers to gather useful information of their prospects, is also very powerful online lead generation technique. But with this stats indicating that only 1-2% actually will ever be willing to share the information, makes this lead generation technique not that attractive.

It looks the B-to-B has transferred to modern pattern, from traditional to

digitalization and internationalization.

I would like to analyze how companies can still make use of the traditional marketing. Combining both traditional and online marketing techniques, powered by marketing automation and sales intelligence tools) companies get the best possible ROL from their marketing budget. Integrated marketing will not only augment the marketing efficiency, but will also give the marketing a much needed boost in this digital age.

The traditional B-to-B style, modify tradeshow, events to B-to-B portal website and E-commerce. Another choice is to combine traditional B-to-B and modern e-commerce B-to-B together; it no doubt will provide a totally new future and prospect.

The B-to-B develops from traditional to modern; the trend is closed to E-commerce and digital. With the increasing development of technology, the digital and e-commerce will become to the certainly trend.

In fact, either traditional B-to-B or modern B-to-B, they have relationship between both of them. Traditional B-to-B is basis for modern B-to-B, every form of B-to-B is developed from traditional; at same time, modern B-to-B is improvement of traditional B-to-B. For nowadays, the traditional B-to-B does not disappear in real B-to-B market; but the modern B-to-B market has developed to a very high level. As two sides of one coin, they play their roles together for the B-to-B market, they can improve and complementarily each other, and make the B-to-B market developed more comprehensive and sharply.

2.2 Modern B-to-B development ---- Ecommerce

2.2.1 Definition

Ecommerce is the use of international networked computers to create and transform business relationships. Applications provide business solutions that improve the quality of goods and services, increase the speed of service delivery, and reduce the cost of business operations. This is a new methodology of doing business in three key areas: business to business,; business to consumer; intra- business.

It is most commonly associated with buying and selling information, products, and services via Internet, but it is also used to transfer and share information within organizations through Intranets to improve decision-making and eliminate duplication of effort. The new paradigm of ecommerce is built not just on transactions but on building, sustaining and improving relationships, both existing and potential.

Ecommerce is a new way of doing business, available to companies of all sizes, to create new relationships and extensions to existing business built on relationship, networks and webs of activities. Ecommerce levels the playing field for any organization that chooses to participate, small or large. (B-to-B market and E-commerce,

2.2.2 Reason of changing Businesses operate ways

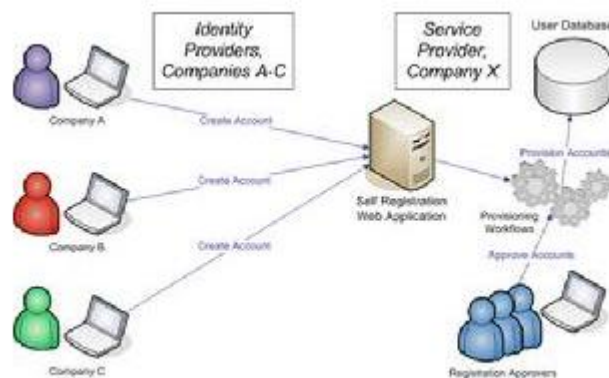
Ecommerce facilitates the current reengineering of business processes which is widespread in most large companies. The goals of ecommerce are similar to the goals of reengineering:

- Reduced costs
- Lower product cycle times
- Faster customer response

- Improved service quality

2.3 Modern Ecommerce

Nowadays, business to business online developed rapidly and sharply; according to the newest statistics, the trade volume of business to business is over the B-to-C. The global E-business of B-to-B, its market volume has reached 26 000 billion USD in 2010, and the expert forecasts that the rate of growth will still keep around 45% for B-to-B market in nearly future. I have to explain about B-to-C, that is, business to Consumer. This kind of sales method is that the suppliers sell their products to consumers directly.



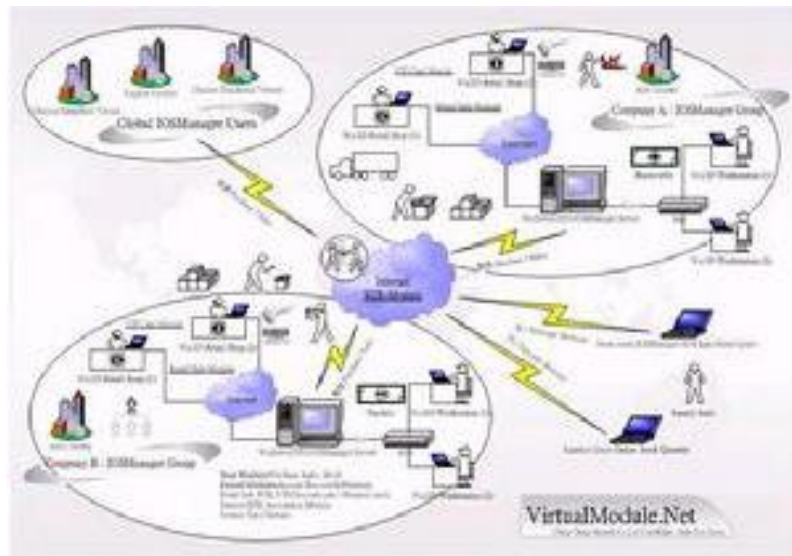
Picture 1 B-to-B model

Resource: <http://glgcx.jtc.com.cn/dzsw/jxnr/01ziye/jxnr012.htm>

B-to-B business is the strongest thruster for the economic development, not only nowadays, but for the future. Currently, there are two modes used by B-to-B:

Firstly, vertical B-to-B, this kind of business mainly aimed to manufacturing and trade or business. Vertical B-to-B can be divided into two directions, that is, upwards and downwards. The manufacturer or retailer can form the

supply-demand relationship with upward suppliers. The cost of vertical B-to-B is lower than others, because vertical B-to-B provides to all practitioners in one industry, so the customers are limited and centralized.

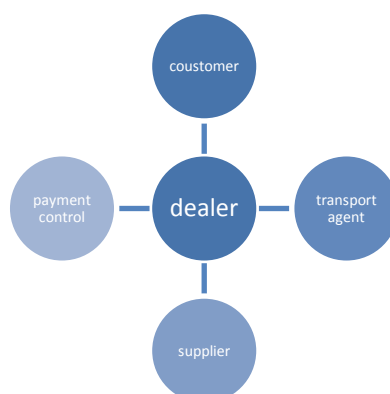


Picture 2 Vertical B-to-B model

Resource: <http://wiki.mbalib.com/wiki/B2B>

Another is horizontal B-to-B, it make familiar transactions from all industries together, and provide an opportunity of purchasing and supplying to enterprise or business.

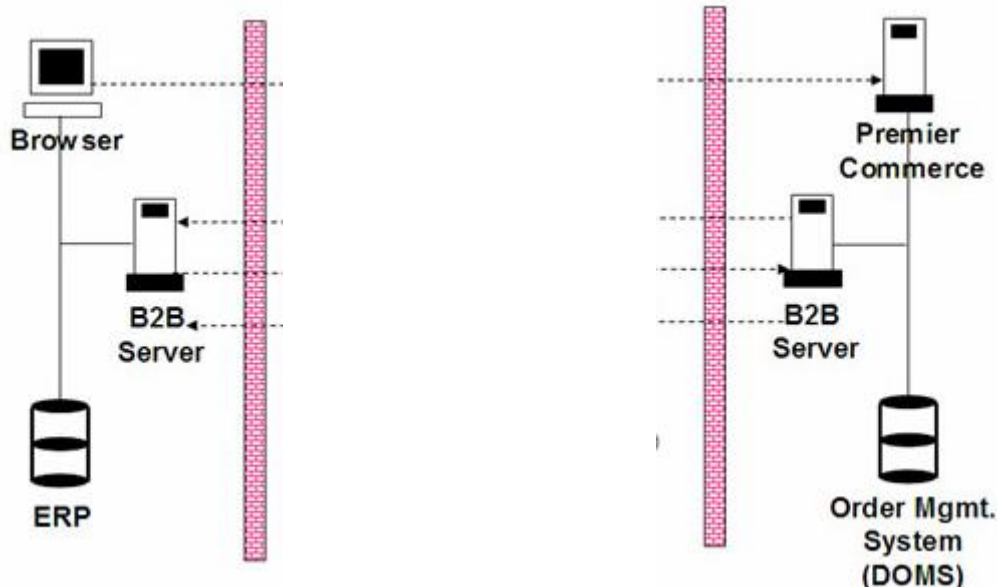
2.3.1 Ecommerce process



The normal process likes the flow chart has showed, the whole transaction

around dealer and supplier, when the customer sends an order to the sales company or dealer, the order should included in all products information, after the dealer received this order, the dealer will send the order to suppliers for checking; if the supplier can satisfy the order's requirement, the dealer will check with transport company about the delivery information, and after all of these, the dealer will give customer a consignment, when the customer receive this consignment, need to pay to payment control. And the dealer will inform Transport Company to deliver the goods, and then get the payment.

This is the normal way B-to-B process, the dealer is the key sector. It should organize and arrange all the business transaction. The sales company needs to contact and do business with supplier and Transport Company directly, provide both goods and service to customer at same time.



Industry standard XML Protocols:

- cXML (Ariba)
- xCBL (Clarus, PeopleSoft, Rightworks)
- OBI (Intelysis)
- OCI (SAP)

Flow chart 1 industry standard XML protocols

Resource: www.dell.com

Make Dell company as example, the flow chart shows the IT Data process.

The first step, the Browser is authorized, enter into the Premier.

The second step is between B2B servers, give purchasing data, and the sales company confirms the order from consumer. And the premiers arrange to deliver goods to browsers.

Dell delivers business to business transactions that allow organization to lower their procurement cost. With a B2B solution, the consumers can shop online from their enterprise resource Planning (ERP), “procurement” application and return the contents of consumers’ shopping session back to their ERP system electronically.

Dell defines B2B integration as server-to-server communication over the internet integrating both system and business processes to dramatically transform the way Dell conducts business with their partners, suppliers and customers. By electronically integrating these processes, Dell not only benefits in process efficiency and information accuracy, Dell also increase their ability to respond and interact with each member of business relationship.

Dell’s has two objectives with its B2B integration initiative:

- a. To quickly integrate with customers who are capable today
- b. To help customers build a B2B solution for rapid development and connectivity.

(<http://www.dell.com> 28 November, 2010)

2.3.2 B-to-B ecommerce current situation and development trend

B-to-B is changing the operation methods of the whole world’s economy. According to Forrester Research Company’s report, the B-to-B has included in many industries, such as computer, IT industry , E-commerce solution, finance,

and telecom industries.

So the current situation is that B-to-B operation process will be the important point and direction of B-to-B in current period.

Although the B-to-B market developed well, its development is still not perfect. This non-perfect aspect shows that it has some congenital advantages, such as bargain online and co-operation online, they cannot bring into play at all.

But maybe just 11% of B-to-B transactions are transaction online, and almost of them are just simple implement the orders. But in fact, bargain online is the most important tache of deeper and winder cooperation between the seller and the buyer for many enterprises.



Flow chart 2 Internet enterprises' development trend

Resource: Lawrence S. Welch, Gabriel R.G Benito. Bent Peterse, Foreign operation methods

According to the flow chart, it shows the development of online enterprises.

Its development experienced and will go through three mainly stage, from the beginning, the simple stage goes to the future, the development trend is quite clear. (The Boston Consulting Group, Jim Andrew, 2007)

After the researching of 260 online dealers, currently B-to-B low level mode cannot simulate the traditional transaction mode. Almost half of objects' online business still need supported by traditional transaction, the whole business can be completed. (The Boston Consulting Group, Jim Andrew, 2007)

With the B-to-B mature and the perfection of price comparison, the stress of

sellers' market will increase. 25% of sellers felt the heavy pressure of price comparison already; in addition, 50% of objects think this price comparison will give them more pressures in the nearly future.

(The Boston Consulting Group, Jim Andrew, 2007)

2.4 B-to-B marketing strategy

First of all, I try to conclude the main marketing strategy of B-to-B market.

Generally, there are five methods for the B-to-B marketing:

---- Forceful promotion

Through the traditional medium and fairs for promotion

---- Cultivate customers

This strategy can guide the traditional customers try to use it.

---- Customers self-help

It will provide free information portal and some self-help tools

---- D-to-D service

Understand the traditional dealers' demand ---- help them search suppliers or sales distribution channel --- save the information to internet ---- inform the users' feedback directly.

---- Email list

Collect all users' email addresses and send B-to-B relative information at regular way.

According to above marketing main strategies, choose five industries and make SWOT analysis. Make sure every industry choose the right marketing strategy, and give an integrated analysis.

2.4.1 SWOT analysis

Reference the MSE website marketing & B-to-B portal integrate, Liu Yanqing & Ren Yonghong. The SWOT analysis for B-to-B marketing, can mention in four

ways follow S.W.O.T.

(1) S---- Strength

Strength refer to that one enterprise has more advantages than its competitors, or the enterprise has its own especial things can increase the competitive power.

- Plan or technical advantages
- Tangible assets
- Intangible assets
- Human resource

(2) W---- Weakness

It means that the company lacks or disadvantages.

- Small market scale
- Strong competitors
- Financial lacking
- Washing out in industry

(3) O---- Opportunity

Opportunity impact the whole B-to-B website strategy as the most important element, manager should confirm every opportunity, analyses the processing and future, choose the best opportunity which can match the fund, resources and also can get the best competitive advantages.

The industry is sunrise industry: the industry which is chosen developed to good direction; the whole industry is sunrise industry, the new company enters this market and small or limited scale of market as disadvantage will be decreased.

- The users increase or not.
- Enough fund.
- Create the new opportunity.

(4) T---- Threat

About the outside threat, there are always some threats in B-to-B market, threaten profitability and market positional.

- The stronger competitors.
- The whole industry decline.
- Web-site development trend.
- The Matthew effect.

(MSE website marketing & B-to-B portal integrate, Liu Yanqing & Ren Yonghong)

2.4.2 Establish marketing strategy.

Financial supporting: some of competitors in one industry are strong, if want to overcome competitors, the enterprises need financial supporting.

Enhance development and research: some of enterprise's popularity is high, but the portal is not easy to use, the mode cannot satisfy users' demands. So the development and research is needed, use the technology promote market share.

So according to the SWOT analysis, bring the advantages of website into play, avoid any disadvantages, and catch all opportunities, the strategy will help the enterprises to establish and operate.

The transaction between traditional businesses will spend many resources and time. Sales, distribution and purchasing all need production cost. The buyers and the seller can finish whole business process through B-to-B transaction method, from establish original impress, compare with different suppliers, then bargain and delivery, finally customers service. B-to-B reduces many work processing and management cost among enterprises, reduce the operation

cost. The convenience and extending of website enlarge the business area, it is easier to do transnational business and at same time the cost should be low.

One company, no matter what it has strong strength or perfect strategy, it is impossible that implement B-to-B alone. The enterprises alliance becomes the development trend. The website makes information goes to everywhere, the enterprises can establish complementary and mutually beneficial co-operation, become horizontal or vertical business integration. B-to-B provides a basis for the enterprises.

3. Internationalization

International business involves understanding the external environment, conducting country risk analysis, deciding on an entry strategy, managing the strategy functions, understanding the effects of foreign exchange transactions and recognizing the value of global outsourcing.

The businesses have engaged in international trade for many years. Nowadays, the international business has played a major role in shaping world history, from nations' attempts to control trading routes to their colonization of countries.

In the new world, Chinese, European, Japanese, South Korean and USA companies will not only be competing with each other; they will also be competing with highly competitive companies from many parts of world.

International business management is a complex, multidimensional field. The intense competition for world market, global expansion, and dramatic changes in technology have made the task of managing an international firm so challenging.

#	Country	Hourly Wage Rate	Weekly Wage Rate	Monthly Wage Rate
1	Austria	19.38	----	----
2	Australia	----	870.00	----
3	Canada	17.76	----	----
4	Czech Republic	----	----	884.32
5	China	----	----	102.00 ^a
6	Ireland	19.04	758.10	----
7	Japan	----	----	3,569.10
8	Netherlands	----	1,082.72	----
9	Philippines	5.32	----	----
10	Romania	----	----	383.83
11	Singapore	----	----	2,364.70
12	South Korea	----	----	2,799.35
13	Spain	16.97	----	2,382.50
14	Taiwan	----	----	1,298.40
15	United Kingdom	19.25 ^a	----	----
16	United State	16.50-25.00 ^c	----	----

Table: 1 ILO Statistics and database

Source: <http://www.ilo.org/>

a. As reported by China Labor Watch, July 2006, pp.1-4

b. UK Statistics Authority, "Wage Rate". Available at <http://www.statistics.gov.uk/> (accessed June 19, 2007)

c. U.S Bureau of Labor Statistics, available at <http://www.bls.gov/oes> (accessed June 19, 2007)

As shown in table 1, no doubt the international enterprises seek out countries where they can benefit from the low wage rates, provided the skill and productivity levels of the workers from low-wage-rate countries are comparable

to those of higher-wage-rate countries.

Business are adapting to a more global philosophy, as well. Globalization implies that the countries of the world are more interdependent on each other and that the people in these countries are affected by events and conditions outside their own country.

With increasing globalization, many kinds of business become more and more diversification. B-to-B is also based on this background develop to the international B-to-B, and the main way is through export and import. In B-to-B, enterprises co-operation with each other, through the B-to-B portal establish the new trade and economic situation.

(James P. Neelankavil and Anoop Rai, Basics of International Business chapter 6)

3.1 international business researches

Business research, like all business activity, has become increasingly global. Enterprises have operations in foreign countries should understand the unique features of these markets and determine if they need to develop customized strategies to be successful.

Information about environments, customers, market forces, and competition is essential in planning entry into overseas market.

About this international business or international B-to-B research, there are several methods can be mentioned in this part.

- Cost
- Available or secondary data
- Quality of data
- Time pressures
- Lead time

- Complexity of international research
- Coordinating multi-country research
- Uses of research
 - ✓ Determining market potential
 - ✓ Financial decisions
 - ✓ Manufacturing plant location decisions
 - ✓ Formalizing strategy

3.2 Business to business globalization development

Internationalization and globalization are similar terms and are often used interchangeably in the general business press. The firms extend products and services into overseas markets, usually from their home country.

Advantages of internationalization and globalization:

- Extending successful home market products and strategies into new markets
- Taking advantage of factor resources available in the worldwide market
- Building scale economies in sourcing, manufacturing and marketing
- Acquiring economies of scope

3.2.1 Reasons of internationalization

Companies go global for many reasons, most of which can be classified several ways.

Market driver

- -common customer needs
- -global channels

- -marketing transfer and global branding
- -lead countries

Cost drivers

- -Economies of scale
- -steep experience curves
- -low-cost production
- -favorable logistics
- -new product development costs

Government drivers

- Trade and investment
- Barriers Reduced by UN agencies and by Individual government

Competitive drivers

- -Rival Domestic and
- -International firms
- -Imported goods

These all drivers will belong to the corporate internationalization and globalization drivers ---- globalization facilitator: information technologies.

The chart shows that reasons of the companies go to the international, B-to-B as a part of all internationalization enterprises, of course, it cannot avoid to globalization.

All the B-to-B transaction can base on the common or traditional business' mode and method to finish the whole B-to-B process. The international trade and technology transfers occur as home country products and lifestyles are adapted into countries with similar needs or aspirations in market drivers.

3.2.2 Effects of globalization

The globalization always effects in many aspects, because of business scale and mode change, the effect will include into people, industries, business, consumers and so on.

Any modifies can lead to some impacts, it will show in several ways. Changes in political institutions, changes in economic institutions, economic system changes and commodity orientation changes, changes in cultural institutions, changes in people and values and so on

With the international development and occurred, the country's changing should be happened and at the same time, its changes effect in political, economic and social behaviors.

Country changed in Political, Economic, and Social Institutions

Country Institution	Traditional	Modern
Political institution	Autarchy	Democracy: multiparty systems
Economic institutions		
Economic system	Centralized(communist economies, self-sufficient villages)	Decentralized (market forces)
Community orientation	High	Low
Population base	Rural	Urban
Production base	Agricultural	Industrial
Economic power base	Land ownership	Stocks/shares
Cultural institution		
Family unit	Extended	Nuclear
Gender orientation	Patriarchal	Emancipated
Religiosity	High	Low
Education system	Informal	Formal
Social class: criteria	Hereditary	Wealth
Mobility	Seniority/education	Income
Linguistic and ethnic backgrounds	multilingual	Linguistic homogeneity infrastructures develop to link communities and promote homogeneity
Social behaviors		
Societal tendencies	Conformist	Individualistic
Control mechanisms	Religious/social	Legal

Table: John S. Hill, “” Modern-Traditional Behaviors: Anthropological insights into global business behaviors,” Journal of transnational Management Development.

The globalization effects in many aspects, Table 2 show the basic types of institutional change. Some institutional changes occur quickly. Others evolve slowly, such as changes from agricultural to industrial-based economies. Where change occurs slowly, traditional institutions and behaviors remain for long time in modernizing societies.

The international B-to-B business become regular features of national economies, they influence and are influenced by industry environments, prevailing business practices, and consumers. Most of world markets are less-than-fully industrialized, variable market conditions affect supply chain and market demand levels in particular industries.

The enterprise mode development and the country development, all of them can be analyzed through four discernible stages, moving from traditional societies through to integration and into regional and global economies. The four stages general included:

- Traditional preindustrial societies
- Industrialization and modernization process
- Postindustrial economies
- Regionally and globally involved societies

B-to-B internationalization effects also in the operation and environment changes. Order online, promotion online, negotiation online and sales in international companies all form the new development mode. The exporter and importer do the custom clearance, insurance, delivery through internet; reduce the manpower, time cost on some levels, also reduce the circulation cost and transaction cost. The global B-to-B make all companies shape a huge “market”.

4. International subcontracting in B-to-B area

For modern business development, there are many kinds of international operations in B-to-B. In this part, I would like to elaborate one of all international operations ---- subcontracting.

Subcontracting as a pattern in international operations, provides significant potential for many globalizing companies, and has become to the head option for companies in modern times. The potential of international subcontracting has attended to be beholden the most strongly in terms of its contribution to total cost reduction rather than the capacity to improve the development of international operations. The cost decreasing and employment influence the international subcontracting and at the same time, these two parts have made it a controversial method, with the far-flung coverage of issues relative with the use in business.

If want to understand the subcontracting, should give a definition of international subcontracting, such as international outsourcing, so we should try to clarify the basic idea. One useful definition of subcontracting used by Sharpston (1975, 94):" all export sales of articles which are ordered in advanced and where the giver of the order arrange the marketing." And there is another definitions included the restraint it is should include a contractual arrangement, when there were contra options on if the supply operations of multinational subordinate go back to the parent might to be contained. In effect, subcontracting activity indicates the principle arranges be doing, to be undertaken instead by another party in a foreign location. The proceeds should be in the pattern of components or parts that are collected into a final product

by the rule or it should be in the form of a final product which is sold directly into the end-markets.

As companies contemplate moving to the outsourcing of range of production activities that they carried out in-house previously, they are often faced with significant organizational, coordination and supply-chain questions. These included where to have the good or service produced, which company to use in the foreign location, and what are the specific demands of importing/exporting operations in the different countries involved. Quality assurance is a major issue, as is timely shipping of the different parts and the final product, along with handling the bureaucracies of various countries and payment systems. Answering these questions is a demanding research exercise, particular for companies with limited international experience. For example, a European clothing company might be considering sourcing material from China and India, and having the final sewing taking place in Vietnam. Even this simplified case involves considerable demands on coordination, monitoring and general management of the European markets. Finding and locking in quality suppliers can be difficult.

(Economist (2001,pp 62-3) and company web site, accessed 12/1/2005)

The capability to use subcontracting as a foreign operation method has been assisted by the development of enterprises specializing in the provision of subcontracting to other companies.

According to Edwards,2004; UNCTAD,2004 , In currently, there are two mainly considering for international subcontracting, the focus on its rise in the service sector, have attempted to handle the definitional issue as it applies to the “outsourcing” and “offshoring” .

About the international subcontracting, there are many points related with the international subcontracting as the one most important method of recent

international business and operation methods.

Firstly, it included the use of a foreign entity on a contractual basis to generate the production and services which the contractor then takes over the marketing and distribution role.

Secondly, the end-product or service of the subcontracting should be aimed at the market of the contractee or the third markets, according to the outward-oriented subcontracting, or at the contractor's home market, called inward-oriented subcontracting.

Thirdly, normally the foreign production and service-generating through the subsidiaries of multinationals cannot be defined as international subcontracting. The foreign production by the multinational might have all of features of subcontracting, and have been follow-up directly to the subcontracting to an independent business.

Finally, the international subcontracting defined the broader, if it involves the MNC subsidiaries, the greater its total amount and extent in measured international business activity.

Of course, there are many different definitions of the international subcontracting. In currently international business life, the international trade operation method has shown in diversiform; no doubt, the subcontracting might operate through different ways. But in the final analysis, the international subcontracting is often utilized in international business process nowadays, so the definition of international subcontracting should be defined in several environments, try to analyze correctly.

4.1 International industrial subcontracting

Over the past 50-60 years, the world has been major changes in the

composition of its production processes. Falling transportation and communication costs, coupled with rapid technological changes, intensified competition and economic liberalization have facilitated the process of global economic integration. This has in turn enhanced international trade flows, and especially trade of intermediate products through international subcontracting. Industrial subcontracting represents an essential component within industrial and commercial policies and acts as a strategy synonymous to competitive advantages. Its practice has spread to all regions of the world.

With the objective of enhancing, supporting and promoting small and medium-sized enterprises, mainly in developing countries, the industrial subcontracting and supply chain management programme has been establishing subcontracting and partnership exchanges on a worldwide basis since 1982. In fact, the initiatives of subcontractors from developing countries and those of main contractors from developed countries complement each other.

Nevertheless, some concerns have been expressed about the implications of subcontracting stemming from developed countries and targeted at developing countries. This concern falls under the heading of delocalization: one economic phenomenon, which refers to an international transfer of productive activities from one country to another, as a result mainly of international cost differences.

(UNIDO Intern, Industrial subcontracting and supply chain management, Jean-Louis Morcos)

4.1.1 Definition of industrial subcontracting

The role of industrial subcontracting has become increasingly more important

over the past few decades. Actually, the industrial subcontracting acts a very efficient mechanism to organize industrial production through the establishment of a co-operative agreement between various complementary units of production, namely between a main contractor and various suppliers or subcontractors.

The main contractor entrusts one or several enterprises with the production of parts, components, sub-assemblies or the provision of additional industrial services that are necessary for the completion of the main contractor's final product.

Consequently, the subcontractors undertake the designated activity following the requirements of the main contractor, which in turn enables them to achieve higher levels of specialization in designated fields and sectors.

An economic relationship where one entity, the main contractor, requests another independent entity, the subcontractor or supplier, to undertake the production or carry out the processing of a material, component, part, subassembly or the provision of an industrial service in accordance with the main contractor's specifications.

4.1.2 Reasons of subcontracting rising

For the past 30 years, industrial subcontracting markets have grown at a greater rate than the industrial sector taken in its entirety. There are many reasons to explain why this has happened. Firstly, over the 1960s and 1970s, the main medium of competitor was that of price where enterprises simply sought to reach economies of scale and thereby to manage growth and acquire greater market shares. In this system, quantity prevails over quality and therefore there is no strategic need to subcontract parts, components, or sub-assemble to meet specific product characteristics. In contrast, a better

strategic policy is for the production process to be completely integrated.

(Cabinet Verley, Press Kit Mideest 2002, P24)

On the other hand, from the 1980s onwards, competition was not based upon prices but also and more importantly upon quality or product characteristics. In other words, in such a system, innovation plays a crucial role for the product to be differentiated from the rest of the market. The companies focus on upstream activities such as R&D, marketing and product design as well as on downstream ones such as sales and promotion. Increasingly, the importance attached to latter tasks because the focus to be switched away from the means of production resulting in them being assigned to specialist partners in the supply chain.

(Cabinet Verley, Press Kit MIDEEST 2002, p24)

Secondly, an additional factor that has caused subcontracting to flourish is the development and widespread use of highly productive and flexible production techniques and methods based upon robotics and integrated production technologies. Subcontractors are usually in a better position to take advantage of such methods. Indeed, by combining a large number of orders from different clients, they are able to maximize the capacity use of their equipment and hence to offer a better price for their services

(Cabinet Verley, Press Kit MIDEEST 2002, p24)

Finally, increased levels of competition and the development of new techniques of production have led to a high level of sophistication in the design of products. To manufacture a product that features all the adequate material and principles in an efficient and profitable manner, it is necessary to call in partners with specific expertise in designated fields.

(Cabinet Verley, Press Kit MIDEEST 2002, P25)

4.1.3 The importance of subcontracting

The production process of a particular American Car Producer

Thirty percent of the car's value goes to Korea for assemble, 17.5 percent to Japan for components and advanced technology, 7.5 percent to Germany for design, 4 percent to Taiwan and Singapore for minor parts, 2.5 percent to United Kingdom for advertising for Ireland and Barbados for data processing. This means that only 37 percent of the production value... is generated in United States."

Resource: Grossman and Helpman, 2002, P1

Through this simple example, it is not difficult to find that how important of subcontracting.

Nowadays, subcontracting is omnipotent. Grossman and Helpman refer to this example quoted in the 1998 WTO annual report illustrating the importance of subcontracting or outsourcing by showing that only 37% of the production value of a particular "American" car is generated in the US.

In Fact, it is estimated that industrial subcontracting in US in 2001 generated about 300 billion US dollars in turnovers, with about 1.6 million enterprises subcontracting some of their activities. About 146,000 enterprises were registered as industrial subcontractors and suppliers. In fact, more than 30% of large-scale companies were recorded as outsourcing more than 50% of their production through subcontracting orders.(Resource: Schicchi, 2002, slide 9)

Furthermore, in East Asia as a whole, in 1996, parts and components represented 20% of total exports of manufacturing products. it also represented at the time the fastest growing share of exports with a growth rate of 15% per year and correspondingly also accounted for an increasing share of

industrial imports.

(Ng and Yeats, 1999, cover page).

European-based companies have also followed the same trend of taking advantage of the efficient and complementary production processes that subcontracting offers. According to a survey of 162 interviewed European companies, almost 50% of the companies were found to outsource all or a substantial part of their information functions. Nevertheless, the Confederation of Finnish Industry and Employers has estimated that in 1996 subcontracting constituted up to approximately 50% of the sales of Finnish manufacturing firms. However, the magnitude of the outsourcing activities was estimated to have increased by 30% during the 1993-1996 periods. It has also been estimated that Nokia alone makes use of more than 300 domestic Finnish subcontractors in addition to an almost equally high number of foreign subcontractors.

(Shy and Stenbacka, 2003 P2)

Country	Output value of Industrial Subcontracting in 2001 (Euro millions)	Number of companies	Employees engaged in Subcontracting activity
Germany	191,454.59	118,138	1,349,854
France	114,144.22	100,825	930,916
Italy	94,508.55	162,155	849,885
United Kingdom	79,342.52	102,111	774,102
Spain	46,137.56	99,019	618,097
The Netherland	20,110.48	19,249	151,292
Belgium	18,731.19	22,331	132,002
Sweden	17,660.06	23,733	151,217
Austria	15,949.98	10,878	127,372
Portugal	10,387.85	36,966	175,895
Finland	10,135.20	9,853	73,974
Denmark	9,773.91	11,363	85,085
Ireland	5,280.21	12,218	60,244
Greece	4,611.34	20,847	78,319
Luxembourg	1,126.69	785	8,411
EU Total-15	639,354.35	750,471	5,566,665

Table: industry subcontracting, Daniel Coue (RIOST-CENAST, 2002, p9)

Through this table, it is not difficult to see that European-based companies have also followed the same trend of taking advantage of the efficient and complementary production processes that subcontracting offers. According to the figure shown in the table, the subcontracting market of EU-15 in 2001 was evaluated at 639,354 million Euros with approximately 750,471 companies registered 5,566,665 employees engaged in subcontracting activity.

4.1.4 Forms of subcontracting relationships

The increasingly growth of subcontracting has lead to the development of two types of subcontracting relationships, one based on capacity and one based on specialization.

a. The capacity subcontracting:

The first type of subcontracting relationship is that of capacity subcontracting. In such a situation, the main reason causing the subcontracting relationship to take place the fact that the main contractor does not have enough capacity to undertake the fabrication of the specific component, part or material.

(Source: Cuny and de Crombrugghe, 2000, P16)

In other words, the main contractor has reached a capacity limit in its production process and in order to meet market demand for its product is required to refer to a subcontracting specialist at least for a temporary period of time. This usually represents a complementary horizontal disintegration of production.

(Taymazand Kilicaslan, 2002, P2-3)

b. Specialist subcontracting

Specialist subcontracting represents the second type of industrial subcontracting relationship. In this case, the main contractor relies upon the services of a subcontractor or set of subcontractors who has specialized equipment or machinery and skilled labor to undertake complex and precision tasks.

(Cuny and Crombrugghe, 2000, P16)

Hence, this may involve either finished products or specialized components or supplier that requires a higher level of technical expertise, which the main contractor does not process or cannot meet. In such a situation, both firms

have vertically related complementary assets and/or technologies.
(Taymaz and Kilicaslan, 2002, P3)

4.2 Subcontracting development

About the subcontracting development, there are some drivers to conduct its development, such as cost, technologies, impact, and cost reduction and so on.

Of course, there are many factors which have been involved in the growth of international subcontracting, difference in costs, labor cost has been probably the mainly single stimulus and has remained through the spread of subcontracting in manufacturing and in service sector also.

Another point of subcontracting is the advanced technologies. The influence of cost differences on subcontracting has been felt in a wide range of industries, not just standardized manufactured products. The growth of international subcontracting in products combining more sophisticated technology has gone hand in hand with the development of enterprises' provision of systems solutions to industrial customers. Systems solutions include incorporation of hardware and software elements, sometimes very complex, designed to satisfy the particular needs of individual customers.

(Luostarinen and Welch 1990).

The international trade is freed through different protection-reducing measures in different kinds of industrial, including goods and services, the cost differences between countries are able to be acted upon. This is perhaps being most starkly exposed with the demise of the multilateral Agreement on Textiles and Clothing at the end of 2004. China is seen to be well placed to increase it's already dominate share of world trade in clothing, although India

is also predicted to be a major beneficiary of the removal of the system of quotas. The WTO estimated that China's share of US clothing imports would rise to 50% in 2005 as a result of the removal of quotas, up from 16% in 2002, when India's share was expected to reach 15%, rising from a minor position of just 4% in 2002. (Nordas,2004). Not surprisingly, affected manufacturers in the USA have been lobbying the government to introduce measures to restrain the expected surge of Chinese imports. They have already been successful in having growth ceiling applied in some product areas, under the terms of a special provision introduced as part of China's WTO admission permitting such restraints until 2008. The head of US retailer JC Penney's purchasing unit has commented that "he will monitor how Washington applies safeguards to limit Chinese exports; so that he is not caught having ordered products that will be barred from entering US ports'.

(Hiebert, Murphy and Vanderwolk,2004,32).

Chinese authorities have become concerned about a too rapid rise in Chinese exports of clothing producing a protectionist backlash. In the first quarter of 2005 there was a large jump in Chinese clothing exports which generated such a high level of protest in the US and Europe that China voluntarily introduced export taxes on a range of clothing products.

(Economist, 2005b).

4.2.1 UNIDO for subcontracting development

The subcontracting is a very important component in modern economics and acts as a substantial vector for economic development. Its practice has developed and become widespread and the need arose for the establishment of a more permanent framework that facilitates the building of industrial subcontracting relationships.

For the development of subcontracting, the UNIDO has recognized this and as a result in 1982 set up the Programme for the Promotion of Industrial Subcontracting and Partnership now referred to as the Industrial Subcontracting and supply Chain Management Programme.

At the core of the programme, UNIDO (United Nations Industrial Development Organization) has been advocating the concept of “industrial partnerships” which refers to long-lasting and equitable industrial subcontracting relationships based upon the specialization and technological expertise of subcontractors or suppliers. The complementarity of the assets and technologies between the parties involved can thus form the basis for the establishment of vertical type relationships with a long-term sharing of responsibilities.

The UNIDO programme helps developing countries as well as economies in transition generate the benefits entailed by industrial subcontracting agreements between small and large industries. The continuous aim of the programme is to enable small and medium sized enterprises (SMEs) in these countries to reach the following objectives:

- Increasing production and employment levels
- Improve productivity and international competitiveness
- Encourage import substitution and promote the exportation of products
- Upgrade manufacturing process and products
- Contribute to the international redeployment of manufacturing facilities and the transfer of industrial technology and know-how to SMEs in developing countries and economies in transition.

UNIDO had however conceptualized a specific methodology to help meet these objectives and ensure that minimum conditions exist in countries to sustain viable subcontracting arrangement. This involves the setting-up of a subcontracting and partnership exchange in designated nations.

(Jean-Louis MORCOS, 2003, Industrial subcontracting and supply chain management)

4.2.2 Subcontracting and partnership exchanges:

Subcontracting and partnership exchanges are technical information, promotion and match making centers for industrial subcontracting and partnership between main contractors, suppliers and subcontractors, aiming at the optimal utilization of the manufacturing capacities of the affiliated industries. In fact, the exchanges appear not only as the meeting points and the instruments of regulation between the supply and demand of industrial subcontracting orders, and also instruments of assistance to both partners, and particularly the small and medium supplier or subcontracting enterprise.

UNIDO provides technical assistance to developing countries for establishing and operating subcontracting and partnership exchanges. To the end, it assists in setting up a comprehensive roster of subcontractors, suppliers and main-contractors through a computerized database with detailed information for rapid retrieval on:

- Manufacturing capacities and capabilities
- Equipment with technical specification and technical characteristics
- Quality of production
- Spare capacities available for subcontracting works
- Types of products and services offered by the subcontractor

Subcontracting and Partnership exchanges undertake:

- The identification of subcontracting, supply and partnership inquiries or offers from large foreign or domestic buyers and main-contractors and their dissemination to potential subcontractors/suppliers/partners.

- Assistance to potential subcontractors/suppliers/partners is organizing production clusters and associations and in negotiating agreements with main contractors, which could be their own Governments.

So these two programmes all play very important role in the international subcontracting area, provide many helps especially to the developing countries' subcontracting.

Subcontracting has grown substantially across the world over the past two decades and UNIDO has been very active in promoting specialist-based subcontracting partnerships through the establishment of subcontracting and Partnership Exchanges. Subcontracting partnerships are indeed very beneficial for the parties involved and our aim in the following chapter is to outline the benefits of subcontracting and main contractors, and elaborate how the partnerships can be in win-win situation.

4.3 The benefits of subcontracting

Why one business utilizes the subcontracting? It is important reason and roles cannot be doubted. If conclude the reasons of subcontracting, there are four mainly aspects can be considered.

1) Improve the business attention.

The subcontracting can help the company focuses on their own business in widely area, and at the same time, it can get many professional suggestions about the operation details form experts. For many companies, the key reason of subcontracting is just that some problems such as “how to do” costs most vigor of management level. And in case it gives these problems to the subcontractor, the management efficiency and cost will be improved more.

2) Achieve the international excellent ability

Through the professional characters, the subcontractor can guide extension resources to meet customers' needs. If organize to cooperate with this kind of suppliers, the business will get these efficiencies of advanced technologies, tools and capabilities; even the business can get more structurized methods, process, document and the most important competitive advantages.

3) Accelerate recombining profit

The subcontracting normally is the stronger management tool – BRP's one byproduct. In the processing of cooperate with subcontractor, the subcontract can make the enterprises recognize that expected revenue rapidly.

4) Sharing risk

There are many risks relative with investment of companies. When the enterprises utilize subcontracting, it will be make they meet other needs from outside better and more flexibly.

5) Transfer the IS resource to strategy activities

Many organizations will face the problem of limited resource. The subcontracting allows the resource transfer from non-core ability to core ability.

Of course, the subcontracting is utilized in modern international business; the strategy reason is also the very important point.

a) Temporary application.

The subcontract service needs the special implement of exploring or modifying, normally needs amounts of human resource. If like this, the enterprises need to increase the resource in short time, it is obviously so high in cost, so the subcontract is the best choice.

b) Reduce and control cost

The most important reason of subcontract is operation cost reduction and control.

c) More available capital

The subcontract reduces needs for investment of non-core business, it makes capital is more useful in core area. In another hand, because it does not need to show return rate of non-core area, so the subcontract also can show the finance increasing.

d) Cash flow

The subcontract should include that assets transfer from customers to suppliers.

e) Receive the lacking resource

The company chooses subcontract, sometimes because it does not the especially resources inside, in this time, choose subcontract is more important and reasonable.

4.3.1 The benefits of subcontracting to main contractors

a. Cost reduction

There are many reasons motivating companies to subcontract as part of a new mixture of overlapping strategic priorities. Firstly, companies are driven to subcontract to take advantage of national, regional or international differences in factor cost, notably low wages or materials. For industrialized countries, production or purchasing abroad is in many countries cheaper than domestic production or domestic buying. Finally, this enables companies to reduce the cost of the final product and thereby to offer competitive prices.

For example, according to study by Van Eenennaam, cost advantages were the first and by far more important reason for Dutch companies using international production facilities. Other reasons included: higher flexibility, risk reduction, environmental policies, raising quality and entry into new technology.

Figure 1: Reasons for Dutch Companies Producing/Outsourcing Abroad.

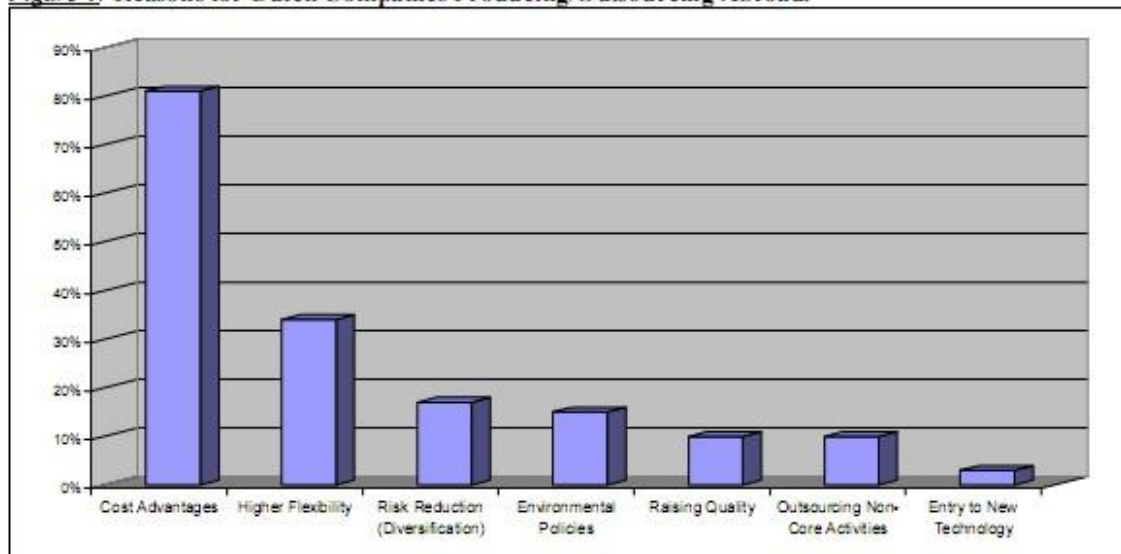


Figure: reasons for Dutch Companies Producing/ outsourcing abroad
Adapted from Verra, 1999, P4

There are a number of reasons that explain why placing orders with subcontractors help reduce costs.

(De Crombrughe and Garrigos-Soliva, 1997, P41-42)

- Subcontractors have more flexibility as management can take decisions more rapidly whilst production programmes may be changes or adjusted more easily.
- Highly specialized subcontractors are more efficient in their production processes and undertake these processes in a cheaper manner than contractors,
- Subcontractors usually conduct little research, marketing and development activities which reduces their costs.
- Low overhead and administrative costs.
- Subcontractors usually have less equipment and machinery as well as simpler workshops than large scale companies.

I would like to illuminate the cost of subcontracting issue through one example. One survey from Murphy and Daley, they suggest that 75% of the respondents

in their study spent at least 25% of their purchasing budget on transportation. Additional, they found that due to the distribution problems, it is necessary to maintain an inventory buffer adding another 5-10% to unit cost. And then, Murphy and Daley also found the time needed to delivered products from abroad is typically five to ten times longer when compared with domestic delivery. (Verra, 1999, P3)

Nevertheless, the advantages must be weighed against the disadvantages of producing/subcontracting abroad and these disadvantages are usually underestimated. There are indeed extra costs and time factors involved the high costs of international travel and communication as well as broker and agent's fee and finally costs of distribution which add another 10-15% to product's unit cost.

b. Higher quality

The search for higher quality products with high reliability in a growingly sophisticated environment pushes companies to subcontract. Frequently, in-house specialists may not match and may not meet the required criteria and as a result companies refer to the specialist skills and higher degrees of competences available through outside suppliers or subcontractors.

There are more efficient and more effective and can provide the part, component, assembly or sub-assembly with a higher level of accuracy and precision. The alternative of having to train and upgrade the skills and abilities of the labor force or to acquire the relevant machinery and equipment requires both time and large financial deployments. In this sense, subcontracting represents an excellent process to complement the core activities of a business with high quality components, pats, packaging and other elements. So, some countries, regions or clusters of industrial sites have acquired an international reputation for manufacturing or producing high quality products,

parts or components. Hence, using subcontracting agreements are able to remain competitive and sustain a competitive advantage. (Verra, 1999, P3)

c. One efficient mechanism to respond to demand fluctuations

For this point, the availability of products/raw materials is an additional reason why companies decide to source internationally. In order to meet product demands, companies can add international suppliers to their portfolio of domestic suppliers (Verra, 1999, P3). In another word, using the international subcontractors acts as a hedge against fluctuations in demand.

When faced with a temporary increase in demand or a seasonal upward trend, contractors have to decide whether they want expand their capacities through heavy investments or alternatively subcontract the activities. The former decision however involves the risk of under-utilization of this investment in the future. Expanding the capacities of an enterprise to respond to demand levels induces heavy investments in machinery, equipment and plants or some large manufacturers tend to use plant and equipment well beyond depreciation stage to avoid having to undergo such large re-investment burdens. In contrast, entrusting a subcontractor or supplier with the completion of parts, components, assemblies or sub-assemblies, is a much more capital-effective of meeting upward demand fluctuations and avoids excess capacity.

(De Crombrugghe and Garrigos-Soliva, 1997, P41)

d. Potential growth prospects:

Finally, international subcontracting offers commercial opportunities by penetrating markets with growth prospects. By subcontracting in a promising country, companies establish a link with that particular location and penetrate new markets with growing outlets and purchasing power, for example, in the automobile and electronics industries in India or China.

4.3.2 The benefits of subcontracting to subcontractors

a. higher productivity and efficiency

The benefits of subcontracting are also plentiful for subcontractors, especially those of developing countries. First of all, subcontracting leads to a specialization in the completion of specific activities or specific components or parts. The type of specialization enables to the subcontractor to achieve a higher level of efficiency and skill and thereby higher levels of capital and especially labor productivities.

b. Use of spare capacity

Subcontracting arrangements also enables enterprises to increase the rate of utilization of the installed capacity and to improve capital and labor productivity; indeed, they have under-utilized facilities soon.

Finding outlets for spare industrial capacity helps increase production thereby raising output and ultimately revenue. An additional consequence is that it generates the creation of employment opportunities. Actually, the contractors can make subcontractors to stabilize their orders over a given period of time.

c. Economies of scale

By the concentrating on a single and specialized activity or discipline, subcontracting service providers can gain economies of scale whilst at the same time further the cost advantages they offer to original equipment manufacturers that are OEMs. Scale economies result from larger facilities, broader and denser networks, and even greater purchasing hit.

(Jean-Louis, Industrial subcontracting and Supply chain management)

d. technology transfer

The subcontracting arrangements act as efficient mechanisms and tools for the technological enhancement of small and medium-scale enterprises. By

engaging in an active collaborative agreement with specific customers, suppliers and subcontractors benefit from a large amount of technology transfer. (Dunning, 1993, P287)

The technology transfer can take one of three forms. The first area of technology transfer relates to product technology which occurs through following routes:

1. Provision of proprietary product know-how
2. Transfer of product design and technical specifications
3. Technical consultations with suppliers to help them master new technologies
4. Feedback on product performance to help suppliers improve performance

e. Risk mitigation

The most recent thinking concerning subcontracting relates to risk mitigation. It is argued that one of the reasons for engaging in subcontracting arrangements is rooted in the need to reduce business risks. While increasing the rate of profit through special orders and improved payment conditions.

(Inventory obsolescence, uncertainty and stock-outs related to volume fluctuations – Chung, Jackson and Laseter; 2002 P3)

f. Financial support

The contractors could provide financial support or improved access to credit to their subcontractors, for instance a contractor could serve as collateral for loans. For large contractors originating from industrialized countries such as Japan, financial assistance could take the form of advanced payments or low-cost rental of standard factories. And even the form of equity participation improves creditworthiness through the use for instance of debt guarantees by parent firms.

(de Cronbrugghe and Garrigos-Soliva, 1997 P41)

Subcontract can help the enterprises release them can they can focus on their core business more. The subcontractor can provide you knowledge, reduce the cost. And the enterprises can pay attention to his advantages of business, improve the whole quality of products.

The subcontract makes many new businesses become to operation. One hand, the subcontracts strengthen enterprises' competition. In process of management system, businesses give the non-core sector or business to other subcontractor; in this way, the cost can be reduced and it is good to increase efficiency of management.

For example, one production enterprise, if it establishes one delivery team just for the transportation of raw material and products, the cost will be increase at least in two aspects:

1. Management cost increasing, because it does not have the experience in transportation area.
2. Because of bad management, the transportation influences the production and sells activities; and the production and sell cost will be increased. If the business gives delivery part to professional logistic company, the cost of above can be reduced.

On the other hand, the enterprises face the huge challenge due to aboil marketing competition.

Increasing market competition, focus on its own business becomes one of the most important rules. Therefore, subcontracting becomes the business method because of its cost reduction, competition increasing.

All in all, the subcontracting as the new operation idea should be trend in the future.

The importance of marketing and brand strength, whether subcontractors are used as a way of extending a company's product range or to produce its core

products, the ability to carry this out without creating a future competitive threat in the subcontractor depends heavily on the contractor's strength in the marketplace, particularly its brand strength.

In normally, international subcontracting is able to companies in developed countries to strengthen their competitive ability in all markets, with the capability to combine advanced technology, design and styling with lower foreign costs of production, typically by accessing lower labor costs. This is further supported by their control over marketing and distribution. As the global reach of subcontractors has extended, this has made it easier for many contractors to source output closer to their end-markets, facilitating faster responsiveness to market changes and reduced transport costs. In general, subcontracting can submit a powerful basis for penetrating international markets, one which has come to be used increasingly by internationalizing companies, across both goods and services. (Foreign operation methods, international subcontracting, Lawrence S. Welch, Gabriel R.G. Benito, Bent Peterse)

4.3.3 International subcontracting

It is clear from the analysis so far that there is an array of forces encouraging the development of international subcontracting, cost different being a key element, but many broader influences have been at work, such as the effect of retailers and lowering of protection. For individual companies, the reasons for using international subcontracting as a mold of foreign operations are more extensive: for example, when cost differences are important, there are many other thoughts that come into play in companies' decision making.

Using a survey of purchasing professionals in the US, Birou and Fawcett(1993,34) concluded that 'international sourcing's biggest benefit is that it submits access to lower priced products. This result in consistent with

price being reported as the primary catalyst that brings firms into the international market... The availability of higher quality goods and access to product technology were also considered to be important benefits'.

According to another survey from US purchasing professionals even found that, 'unlike most of the earlier studies which indicated that lower price was the most important factor in selecting overseas suppliers, these respondents list better quality as the most important factor', closely followed by price (Mine and Galle, 1991,14).

At the same time, for some individual company, there are not only potential cost and even quality advantages from international subcontracting; as an operation form it involves lower cost and commitment in establishing a foreign production base as a means of servicing global markets. As noted earlier, the commitment may be as little as a single order at the beginning, although companies using subcontracting on a widespread basis tend to look for greater assurance by establishing long-term relationships with their subcontractors.

In a general sense, this is one of the most important aspects of subcontracting: it can make a company better equipped in responding to changes in its international environment, including changes in government policy, political risks and modifies in business climate in individual countries. Necessarily, also, non-investment subcontracting means that the contractor is able to penetrate or enter into the market, and leave more rapidly compared to foreign direct investment and some other methods of foreign operation. To the extent that companies increase their level of international subcontracting it should be expected that they will be more prepared to hire in partial de-internationalization (Benito and Welch, 1997).

International subcontracting allows companies to extend their existing product range. When this often means can capability to offer products in the low-price range, sophisticated subcontractors in case may be a source of new and more

advanced products.

(Foreign Operation methods, Lawrence S. Welch; Gabriel R.G.Benito; Bent Petersen)

Companies in industrialized nations recognize that supplier relationship represent very efficient mechanisms for the organization of their production processes.

(Shy and Stenbacka, 2003, p1)

From the subcontractor's point of view, the advantages of receiving subcontracting orders are equally beneficial. By drawing upon its spare capacity, it generates more products and at the same time creates a number of job opportunities. Through this, it reaps the benefits of economies of scale as the demand for specific and precise products rises in parallel with orders from main contractors.

No doubt, the subcontractors are usually small and medium-sized enterprises and these types of enterprises are important for the economic development of developing countries. About the reasons, according to Berry and Mazumdar quoted in Hayashi in 2002, we can get the answers below:

- a. SMEs are important because of the number of establishments, the number of employees and the value of output they represent in developing countries.
- b. SMEs contribute extensively to the favorable combination and utilization of production factors such as capital and labour through the adoption of technologies appropriate to resource endowment and through this participation in an inter-firm division of labor.
- c. SMEs facilitate equal income distribution as a consequence of their large share in labor earnings (Hayashi, 2002, P2)

4.4 Supply chain management

With increasing of the modern society competition, the consumers' demand diversification and increasing of market changes uncertainty. The competition in enterprises transfers to in supply chains. The modern business environment improve the enterprise integrate their own resources and also the external resources, reach the customers' demands better, create more values for the clients, make more profits for enterprises. At the same time, the market situation continues to change; this change makes information in every sector become more frequency, such as: the raw material supply, products design and development, production manufacture, sales and so on. But the operation of supply chain always has self-government, distributivity, isomerism and parallelism characteristics.

Supply chain is around one core enterprise, through control information, logistics and finance, from the raw material purchasing, produce the middle productions and end productions, finally delivery the production to the customers via sale network. Connect from suppliers, manufacturers, distributors, retailers till to final customers, buildup a holistic, functional network chain mode. The supply chain as an entirety, the every tache enterprise takes on purchase, produce, distribute and sales function, form a harmonious entirety.

The supply chain is a network; many enterprises entireties form a net, these enterprises finish one or more productions relative purchasing, manufacturing together, and delivery to final customers. If analysis from operation system, the supply chain is a process, is cooperation of every enterprise entirety, according to customers' orders, through raw material supply, storage, production, delivery to customers, the transferred processing of the product.

4.4.1 B-to-B supply chain

Currently, with the deep development of B-to-B, the B-to-B market becomes to more and more diversity. If classify them according to the function, B-to-B can be divided into mainly two parts: congregate B-to-B and supply chain B-to-B. The former one main submits the electronic portal, put several buyers and sellers together, achieve provide transaction information, match transaction, negotiation and delivery system; help to reduce cost and price. The supply chain B-to-B refers to utilize EDI or Internet do the business, it is a automatic transaction B-to-B method.

If analyze the congregate B-to-B development, just through theories of transaction cost and pricing; but to supply chain B-to-B, it cannot be analyzed by simple traditional theories.

In B-to-B, the supply chain shows three changes and differences:

- (1) Development of Supply chain performance should rely to supply chain cooperation relations.
- (2) Development of supply chain performance needs to share the information with deeper level cross- organization.
- (3) For increasing the supply chain performance, the more advance technology is used to promote information sharing.

According to the “provide core service” divide the B-to-B, there are three classes: transaction service, interaction service and support service. The first one refers to provide all services for transaction, such as searching, product matching, inquire price, payment and all relative services. However, the second one, interaction service, means around plan management, product life-cycle and new product design. The last one, support service, is included in consultation, software integration and all services which can finish the B-to-B supports. So, the supply chain B-to-B should belong to the interaction service

area.

Supply chain B-to-B market can bring the profits for the participants; on another hand, it also can reduce the information technology cost.

4.4.2 Integration options of supply chain management

Supply chain management is a kind of systemic management mode; it manages the network of logistics flow, information flow and finance flow from suppliers, manufacturers, distributors, retailers to customers. Plan and coordinate all operation activities which are relative with three flows, make it becomes to a integrate process.

Modern integration supply chain management based on Internet/Intranet is through integrate net environment; make the all taches of supply chain, such as purchasing, production, sales and finance, as a entirety via information technology, and implement enterprise globalization information resource system.

According to John S. Hill, mentioned in International Business Managing Globalization.

Integration Mechanisms	Global and Multi-country supply chain Integration Options
Information technologies	Supplier—Manufacturer Linkages <ul style="list-style-type: none"> ● Trends ● Sourcing Strategies <ul style="list-style-type: none"> ✓ Home market sourcing ✓ Regional sourcing ✓ Worldwide sourcing ● Supplier Integration <ul style="list-style-type: none"> ✓ Stages ✓ relationships

Multicultural Managers & human resource	International manufacturing systems <ul style="list-style-type: none"> ● Factors affecting manufacturing ● Configuration ● Evolution of international manufacturing system ● Managing manufacturing process transfers across markets
New product development processes	Manufacturer- distributor linkages <ul style="list-style-type: none"> ● Trend ● Organizational options
	Distributor-customer linkages Electronic data interchange (EDI)

Table 3: integration of supply chain management

John S. Hill International Business managing globalization

From the table 3, the integration options of supply chain in international business and B-to-B business area. Totally, to every different mechanism, the integration is different, but some similar points still shown. Even the frame is

only general point, but the global supply chains are international networks linking suppliers, producers, distributors, and customers across national boundaries to facilitate product and service flow to ultimate user, it is obviously.

The market have globalized, supply chain activities have been dispersed across countries to take advantage of low factor costs, national expertise in specific industry sectors, and material resource differences to produce goods and services.

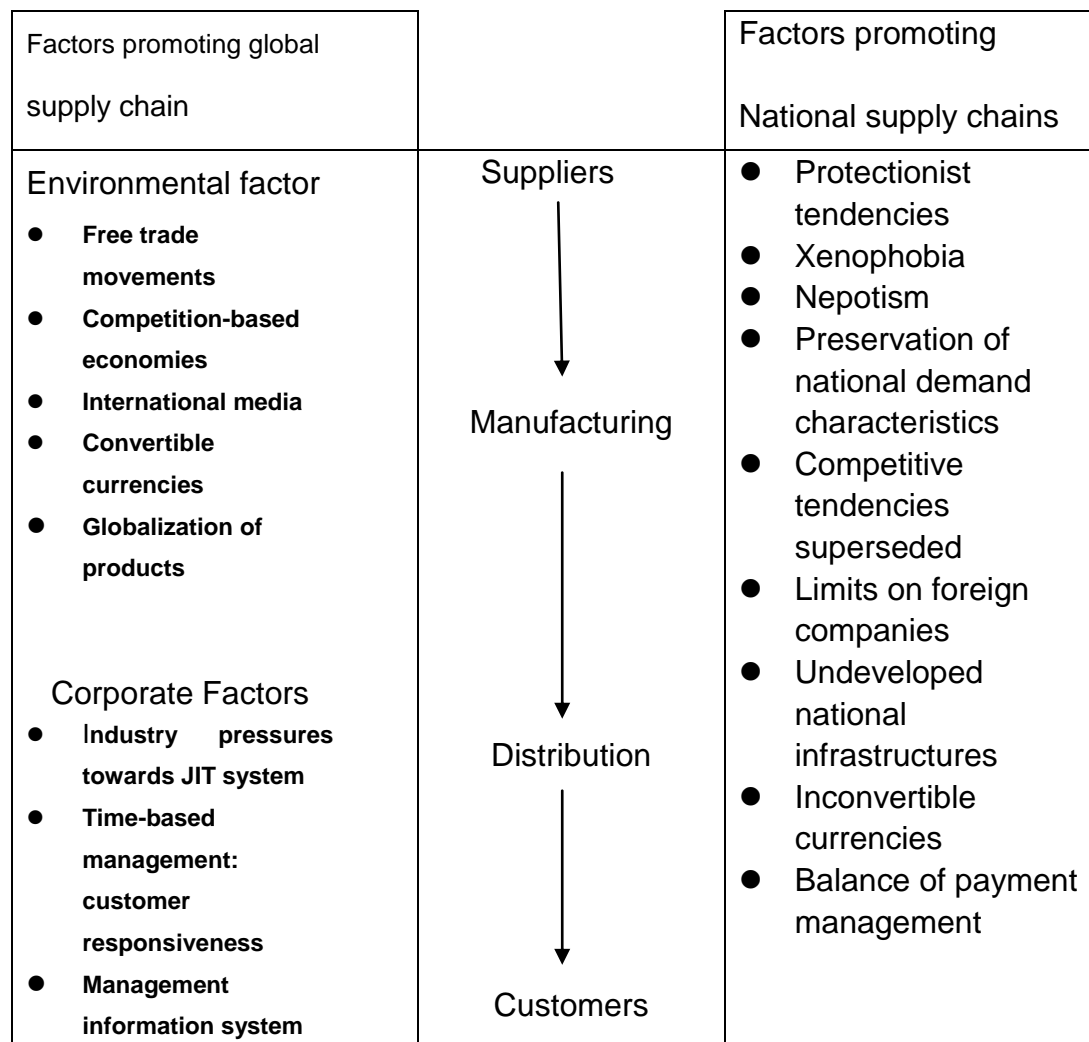


Figure: International supply chain

(John S. Hill, International Business managing globalization)

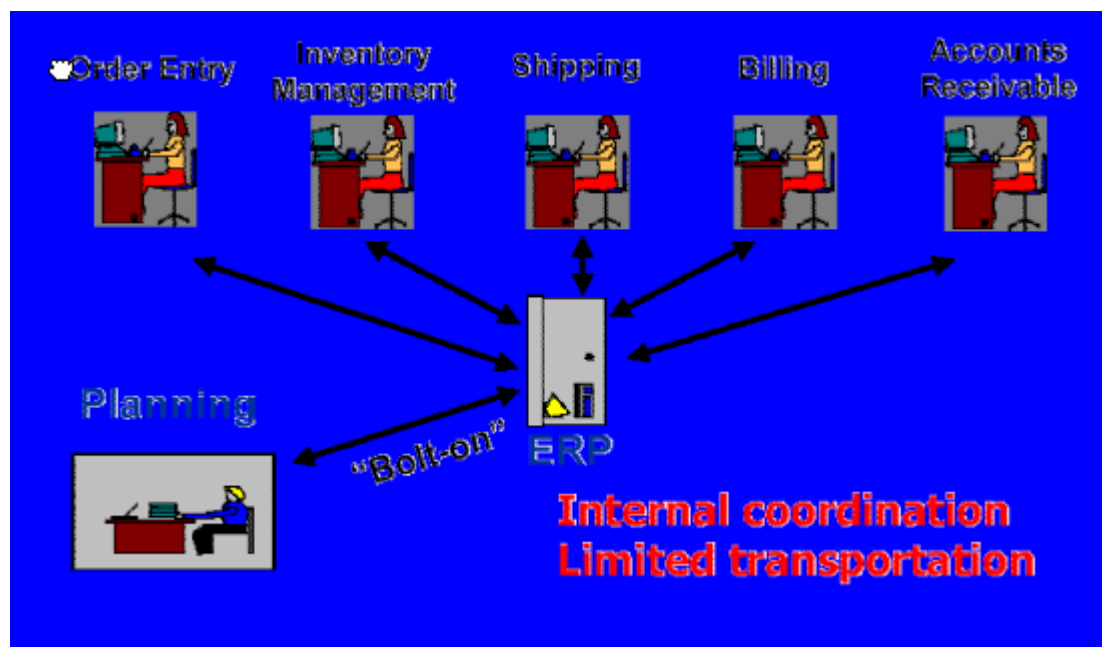
4.4.3 Global supply chain management

Market environment has changed; new market competition environment is quite different from traditional management mode. The new environment shows in economy globalization, customer diversification, consumption convenient and service timeliness.

The supply chain mode is influenced by some successful enterprises, for example, Dell. The supply chain develops to the directional distributing. This trend shows in three parts:

- Value added community
- Focus on customer relationship owners
- Brand owners establish or join in value added community.

Now the supply chain management technology has developed more than when it just was discovered.



Flow chart internal coordination limited transportation

Resource: Xu Zhangyi, Supply chains management conception and application

The flow chart of internal coordination limited transportation as the basis, the development of the supply chain is changing durative. The whole process

always through the internet system as a core point, and bring the customers' demand to the factories in few days.

Supply chain management improves the efficiency and effectiveness of a firm's total operations. Efficient supply chain management requires the coordination of all resources that are applied to the supply chain activities. In the international context, the supply chain system assists managers in acquiring materials and parts from low-cost suppliers that may be located thousands of miles and several time zones away. For example, Dell Computer Corporation buys its suppliers from more than 200 suppliers, over half of which are located outside the United States.

(James P. Neelankavil and Anoop Rai, Basics of International Business. And www.dell.com.cn)

International subcontracting, as demonstrated has become an increasingly useful tool for both subcontractors and main contractors. On the one hand, subcontractors improve their productivity and efficiency, reduce their spare capacity, develop economies of scale and benefit from technology transfers. Moreover, by concentrating on small and medium sized suppliers in developing countries, it stimulates a whole process of linkages within different industrial sectors and hence facilitates their industrial development. On the other hand, main contractors from developed countries improve their competitiveness by reducing their production costs; by having access to high quality components, parts, sub-assemblies or industrial services and by penetrating markets with commercial opportunities. This increased efficiency and the resulting spare resources then enables them to generate new employment opportunities. So not only do the contractors from developed countries and the subcontractors from developing countries benefit but so do their respective nations.

The analysis of international subcontracting or outsourcing has disclosed many of the potential power as a foreign operation method, like in outward- or inward-oriented form, and notwithstanding the definitional issues and converging with foreign direct investment and importing or exporting. In its non-EDI form, it includes a relatively low commitment to establish an effective production base in a foreign market, and may deliver an actual reduction in costs, while aiding flexibility with regard to market servicing and production levels, through the ability to add or delete subcontractors without investment.

Increasingly this is being felt in the services sector where the limit of the services can be profitably outsourced are extended, and overall international subcontracting in this area has been experiencing rapid growth, although it is from a low base compared to manufacturing. At the same time, the analysis showed many of the additional practical demands, problems, unanticipated costs and strategic risks that companies will face as a result of using subcontracting in their international operations.

It seems that the simple and obvious benefits of engaging in international subcontracting have to be balanced against the evident risks, and action taken to minimize these as far as possible. To some extent, international subcontracting has wider implications than the effect on international operations, and these are not always anticipated at the outset. So, here is also the difficult problem of which sector of the company should be subcontracted; One method has been to examine outsourcing options first in areas considered to be 'non-core', although, it is by no means clear what meets into this category given the subtle and often informal interconnections that exist between staff, and across functions and activities within companies.

5 Case analysis: Ala-Talkkari Oy

Based on the theories above, in this chapter, through one case I will elaborate in B-to-B area, the subcontracting operates methods, reasons and selection. The important point is the subcontracting roles in the whole international trade processing. After the whole case, it is obviously to understand the subcontracting is not only the simple service, but also a necessary part of internationalization in B-to-B business.

5.1 Ala-Talkkari Oy

Veljekset Ala-Talkkari Oy is experts in heating systems, with over 50 years of experience. Their main products include 30-700 kW central heating boilers and 30-990 kW solid-fuel bio-stokers. Their heating systems are suitable for heating private homes and large apartment building, farm buildings, industrial buildings, ect. The products also include ground upkeep equipment and subcontracting for various customer groups.

For their heating system, no doubt, there are many different parts form the whole heating system. During their product process, they find that they need to pay attention to core production, but the casting parts always need to take care. So the first choice is the subcontracting, they choose some local factory who can produce the casting part for their heating system. But the result is not so satisfied, the high price in Finland and the quality still cannot be guaranteed. So the change their idea, begin to move their aim to abroad market.

First, they focus on Chinese market. Why they choose Chinese market for their first choice? I also ask this question to them. They believe that China has the capability to produce these kinds of casting part, and also they think they can get the reasonable price from China. Therefore, Ala-Talkkari thinks that they should do not the simple subcontracting in Finland, but international

subcontracting in China, and do the international trade – import from Chinese manufacturers to Finland, they can implement their production through the international subcontract.

Just like the international sourcing firm contracts out to foreign operators to order to advantages or benefits from the large operations and get cheap labor. So Ala-Talkkari chooses China as their supplier, they believe that they will use contract manufacturing in low cost country –China.

5.2 Chinese casting market development trend and prospects

5.2.1 Casting industry development trend in China

The rapid development of China's national economy, businesses go hand in hand, closely related to its casting industry will have an enormous changes, of which the industrial structure and technological trends in these two areas of change and progress as a significant feature. From the industrial structure, the professional will increase the number of casting plant and gradually increase the scale, and some will extend their subsequent processing services; casting was mutual company is merged, combined, dependent trend; joint ventures, foreign investment, joint venture, joint stock companies and other forms of casting will increase; part of the casting plant will consider joining the fleet type of procurement company, a supplier/ manufacturer/contractor in the form of intensive sets a member of the company. In addition, many suppliers will also set up their own casting plant.

If the trends from the technical point of view, the main trend of the following: casting filling process will gradually increase, in theory, in practice will also continue to sublimation; casting process parameters of the detection technology will continue to spread and increase casting production process gradual improvement in the degree of automation and the growing popularity;

the application of computer technology more widely and deeply; large casting technology matures; the use of vacuum casting , casting further expand the application field; mold cavity of the materials have a significant progress, some progress in the new steel; magnesium alloy casting have increased substantially; the use of rapid prototyping design pattern to become the new hot spot; new varieties and their alloys for the casting line with the application material open new avenues; semi-solid metal forming technology will break new ground; squeeze casting will expand the application field of casting; the casting unit to cultivate the full production will be the main mode of casting.

In summary, the full description of casting industry and the automotive industry should interdependence. The casting industry should take this opportunity, while the full expansion of the casting industry categories, the other market areas, and creating a rapid casting industry in China era of development efforts.

5.2.2 Casting industry of China Prospects

China's current economic situation is generally good. In 2008, despite two massive natural disasters, the economy maintained steady and rapid development. Gross domestic product reached 30.067 trillion RMB, an increase of 9% in the fourth quarter of the financial crisis grew by only 6.8%. The casting industry as a substantial reduction of foreign orders, the annual production growth rate fell, indicating that the global financial crisis is indeed a great impact.

However, opportunities also exist. GDP of 2009 grows 8% of the target; to expend domestic demand, the state implemented a two-year total of 4 trillion RMB investment plan, the top ten light industries, are casting industry to provide a vast space for development. Planning objectives in particular the

automotive industry: in 2009 and strive to over 10 million annual sales, from 2009 to 2011 three year average growth rate required to achieve 10%.

Casting industry of the markets generally, including automotive and transportation, construction and domestic goods industry, equipment and instruments, electrical industry, and others. Chinese casting production rising trend since 2001, the average annual growth rate of 13.25%.

According to statistics, China's aluminum wheel supply about 40% of the US market. And it is worth mentioning that, in the fierce market competition, casting companies to obtain ISO9000, QS9000, ISO/TS16949 and ISO14000 international certification such as the work is not only very important, but also casting enterprises in the management of upgrades, and further with international standards important symbol. In general, cannot get the necessary certification, it is difficult to get a good order.

Casting industry to contain mainly by rising raw material, industry competition, the development of space is limited. Although the demand for all kinds of die casting an upward trend, but the upward pressure on prices of raw materials which cannot be fully digested, will eventually lead to casting manufacturer to re-shuffle. Currently, business are using rejection rate, strengthen the management, and improve efficiency, integration processes, development new products and other measures to improve operations. Expected to casting production and the trend will be rendered as:

- 1) Casting plant more professional, the scale gradually increased, and some follow-up increase the casting process, delivery process to the user good until the finished parts.
- 2) Conditional parts production enterprises to set up or merger casting factory, casting components within the enterprise a virtuous cycle of self-supply and optimization of management,
- 3) Merger, consolidation trend on the rise, with the end of product of joint enterprise and parts enterprises, but also business processes associated with the joint, as well as manufacturers and suppliers jointly with or in

combination, or merger or dependent and other forms.

- 4) Casting the introduction of foreign capital enterprises, technology, management, marketing and information. Also build more foreign investment, joint ventures, joint ventures, joint stock companies and other new forms of casting groups.

The casting machine industry the next few years the market more competitive, more and more casting machine business confident in the industry, stop the phenomenon of conversions increased with the strength of large firms many eventually survive, while smaller vendors will change the old and new.

The competition will be the following:

1. Strength of enterprises large and more powerful, the poor small-scale strength of the company with fierce competition forced conversions, or mergers and die.
2. The strength of the relevant companies within the industry as a progressive development of the situation of both competition and cooperation.
3. Casting industry peripheral devices, peripheral equipment, complete sets of facilities supporting the continued expansion of industry categories, increasingly complete.
4. New technologies are emerging, with new technology also has a strong background in power production sector companies to enter the casting machine and will grow and develop.

5.2.3 China's market status and casting industry problems

1. Chinese casting industry problems

Currently, casting market in China faces the paradox situation: firstly, the casting quality of the international market and business conflicts. The center of the world non-ferrous metal casting transfer to China. However, the level of

casting process, technical equipment and enterprises quality, compared with the international advanced level, there are still gaps, the need for a raise and improve the process. Nowadays, casting products export mainly to middle and low, especially in low majority. So Chinese manufacturers actively improve their quality, enhance technical capacity, increasing the added value and achieve industrial restructuring, and gradually become modern casting industry. Second, the rapid casting enterprise development and environment conflicts. Casting enterprise development is extremely uneven, with corporate environmental management and labor do a good health; until production conditions are poor and some serious environmental pollution. Concerned about the environment, health care workers and strengthen environmental management, improve labor health and rigorously enforce the clean production, develop recycling economy, this is only way for the sustainable development of the casting industry. Third, increasing business costs and profit margins shrinking contradictions. As energy material price, the price pressure casting, labor costs, increased investment in environment factors, such as shrinking profit margins, which gives tremendous pressure casting operators. Everything is divided into two parts, the pressure under certain conditions, into power. Profit period, will promote the optimization of casting industry structure is conducive to long time to overcome the small, scattered and chaotic situation, the scale and development group; help to promote integration of industry resources to accelerate technological innovation, enhance quality, improve management. Profit during the need to change management concepts to sustain the state of mind actually; strategic innovation, the implementation of sophisticated management, pioneering and profit margins. Pay close attention to market demand, a prudent investment strategy. Of “market segment”, to create “difference”, pay attention to long-term benefits, the path of sustainable development.

Casting machine industry is developing rapidly in China, the market has

formed a certain scale, but at the same time, the industry, there are some issues to be addressed, specific questions are as follows: first, do not form a strong brand. Currently foreign companies have shifted to the high-end products up, low-end OEM products in foreign countries, they have a sales network, brand, technology, production management advantages, and the country's products are generally produced by OEM sold abroad, and truly their own brand of less, in other countries without their own sales network. Products in the technology and performance is not very different, we can only compete on price, the result of competition is to make the product shrinking profit margins, which rely mainly on a dominant scale enterprises and the share of client resources. Second, the scientific research is immature. Most of the domestic casting machine is engaged in the development application. Domestic manufacturers develop products is equivalent to drawing. A number of factors led to the formation of our business are difficult at this stage, the technical advantages. Thirdly, the management deficiencies. In recent years, some units of production in the planning, purchasing blindness in areas such as casting machine, and some were taken, and some ignore quality bid. Some of the tender, though the company find some casting machine, but the machine and the market people do not understand the judges, along with other reasons, making the tender did not play its due role.

As in recent years a large number of foreign advanced casting machine to enter the Chinese market, coupled with some well-know foreign manufacturers of casting machine set up branch in China, as the traditional production of casting machine of the old enterprises are facing severe challenges.

5.3 Ala-Talkkari Oy Import

Ala- Takkari Oy is professional do heating system, the whole system they all

produce; and at the same time, they also provide the subcontracting service. Under the system whole production, the every part production is a part of whole produce but is important. The part casting product will decide the whole heating system operation.

So Ala-Takkari Oy begins to look for the foreign manufacturers, China is the first choice of them. According to China's producing scale and level, it is not a difficult to find Chinese suppliers. Based on the good quality, the price is the first option to consider.

As the manufacturing company, before they try to choose the casting manufacturer in local Finland; this is the first time they would like to contact some Chinese casting manufacturers. But the first problem is that how to find them. Even there are many ways to get the list of Chinese suppliers' name, but for this case, it is Ala- Takkari's first time, no one knows the way.

Just like I have mentioned above, if Ala-Takkari goes to do this by them, they have to pay a lot of attention on this part, but most of personnel are in engineering, production and marketing in Finland, it is so difficult to get a person especially to do this Chinese resourcing research. at this time, they goes to choose subcontract company to do this kind of job.

Yrityskeskä Oy has a long cooperation relationship with Ala- Takkari, this is a professional subcontract company, it does professional subcontract service for many Finnish companies, and helps them to contact other cooperators and establish the relationship with foreign partners all over the world. This is a worldwide service company, and its main aim to develop aboard market for Finnish company and research the best supplier for companies who needs and wants to get better products.

As a subcontract company, Yrityskeskä Oy has its own cornerstones:

- Complete delivery and network management
- Reliability of delivery
- Promptness of delivery
- Uniform, expected quality
- Flexibility
- Overall reliability
- Excellent interpersonal relations
- Long-term customer relations
- Continuous development ensures that every part of the process is implemented efficiently.

So combine all of above characteristics, the subcontract company can be the best choice for Ala- Takkari, and also they have long- term co-operation already.

No doubt, this cooperation although through subcontracting, is B-to-B cooperation. Even in Yrityshehä Oy's standing, import the products from Chinese manufacturers, this also is the B-to-B business.

According to Finland's subcontracting development, currently the subcontracting has promising prospection, it still based on the history of subcontract development in Finland.

6 Subcontracting company: Yrityskeskä Oy

6.1 history of Yrityskeskä Oy

The first efforts towards Yrityskeskä saw the light of day in the late 80s by South Ostrobothnian entrepreneurs when the founder Matti Mäkynen realized that small could be brought together into a working network, which was be the founding steps for Yrityskeskä Oy.

The early stages of Yrityskeskä date back to the time of the dawning recession in the late 80s. The idea was to create a tool to promote the increasing and rationalizing of subcontracting. The main contractors have been sending a clear message about their need to purchase large deliveries and to operate in a more comprehensive manner with fewer companies. The time seemed right and the need had been expressed on both sides' it was time for action.

The business idea and mission concept were worked on together and guidelines were established. A convenient number of partners were willing to join and the initial capital was raised.

The company was founded in 1989 by 10 partners looking to join forces and knowledge. After the recruitment process the company took off with an air of anticipation, contacting main contractors and surveying manufacturing resources. The credibility of prompt and reliable delivery, learning the pricing and cooperation methods, identifying their own abilities and finding the competitive edge were all steps needed to be taken on the road towards a new operations model.

The 90s recession hit the newly founded company before the operation could be properly launched. The idea of network of subcontractors was still believed in and the operation started growing and developing from the mid 90s.

Since the operation was established, work has been done to improve

know-how in the companies and the skills of the staff, to direct the machine capacity and to look for new cooperation partners. The company has faced its share of delays typical to this sort of new operations model. The laws of supply and demand abide in this sector too; simple delivery or one piece, over supply or the contrary, lack of supplier or machinery for more complex deliveries and an unwillingness to specialize in a narrow field sensitive to economic fluctuation.

6.2 Strategy and vision

Every enterprise has its own strategy and vision in its industry or area, Yrityскеhä Oy as the one of subcontracting companies in Finland. It is as the example of Finnish subcontracting enterprises.

The yrityскеhä business concept is to provide a new level of subcontracting. It markets demanding part deliveries, in which their specialized knowledge and capacity may be utilized. Yrityскеhä buys the services from metal companies in the surrounding region and bears the final responsibility in the projects to the customer.

Yrityскеhä Ltd may acquire other special services from the many knowledge clusters in the region. Its number one priority is to help their customer partners to manufacture internationally competitive machines and equipment.

According to the basic strategy and mission, the subcontracting company is not only doing the subcontracting service in traditional way; it cannot be doubt that the all subcontracting industry has entered totally new and different era. As the one step of international trade, the subcontracting has become more popular in the whole world; it will be the most important role and certainly trend in global economic situation.

6.3 Process of subcontracting

As the subcontracting company, the process of subcontracting is standardization, but it also has its characteristics according to different companies.

In this case, Yrityshehä Oy has its own advantages in international subcontracting.

The process starts from searching the supplier in the target market, for the subcontracting company, the network is so important in the whole business relationship.

6.3.1 Target market description

In Yrityshehä Oy case, the target market is China casting market. The whole Chinese casting marketing is an increasing improvement and developing environment, Ala-Talkkri Oy chooses China as its target market has its own reason.

Chinese casting companies are able to provide all kinds of casting process including sand casting, ceramic casts, precision casts, investment casting, die casting etc. Prototyping is available for sand casting, precision casting and die casting. Precision prototype parts can be made in quantities starting with a single unit and up to hundreds or even thousand.

Chinese casting companies are highly skilled at casting the most of shapes, both external and internal, for one-off precision parts. They are also very adept at producing large numbers of a given casting very rapidly.

The Chinese casting market offers substantially lower hourly rates than their western competitors. There are three reasons for this. The first, obviously, is low cost. The second reason is the low capital cost of Chinese casting equipment. Thirdly, Chinese casting companies work on much lower profit

margins than Western suppliers. There are a substantial number of casting manufacturers in China producing high quality, precision casting for both the Chinese market and for export.

There is an enormous pool of skilled Chinese laborers capable of handling all kinds of casting processes including sand casting, ceramic casts, precision casts etc.

Exports of cast products have risen rapidly over the last two to three years because of these factors while casting hourly rates have dropped. As casting increases in volume, China will become an even greater exporter exports source for casting.

(<http://www.chinasavvy.com/industrial/casting/Casting-Chinese-Casting-Processes.php>)

Hence, Ala-Talkkari wants to purchase in China, also focus on Chinese casting market's many benefits for it. It can get not only high quality products also the low price level, and make the long-term cooperation relationship with each other, it will help to the company's future development.

6.3.2 Subcontracting process

In this case, the processes of subcontracting I operate follow several steps:

Firstly, confirm the target market. The subcontracting service company will help its customer who wants to do the subcontracting in other places or countries. But, those companies do not have enough resources to do this, so they want to buy service from subcontracting company who has this kind of professional resources. General speaking, the companies have their own target or aims, like target market, target price, get the cheaper quotation and

also the good quality.

Then, under this kind of requirement, the subcontracting company will utilize the resources to meet customers' demand.

In this case, Ala-Talkkari Oy wants to purchase the casting from China through Yrityskehä Oy. No doubt, Ala-Talkkari Oy has its own target area is China. Hence, Yrityskehä Oy begins to search the suppliers in China.

Totally, in B-to-B area, China has developed comparative mature. The B-to-B information portal website is in flourishing step, so search the suppliers through this media is no doubt a better way.

Secondly, after get the portal, it is time to select the suppliers. There are more than thousands manufacturers and suppliers publish their information online. So according to their information, send the inquiries to them.

Those suppliers who want to do this business or carry on the order at the first time, Yrityskehä Oy will keep contact with all of them. This is just the basic and beginning, because the subcontracting company does not know whether the suppliers can produce the products what customer wants; at the same time, the suppliers also do not sure if they have enough production capability to meet the requirement. Next step is that select the suitable suppliers from all producers who have contacted with Yrityskehä Oy.

In this step, Yrityskehä Oy will face the selection firstly; it is the first selection for the whole process. For the suppliers who answer or contact Yrityskehä Oy after subcontracting company send the inquiry, all the suppliers will be the candidate suppliers. Yrityskehä Oy as the first selection tache will pick up different candidate suppliers from all of them.

In this case, there are 30 suppliers from China reply Yrityskehä Oy, show their willingness of cooperation. For these 30 different suppliers, Yrityskehä Oy has to understand all suppliers' background, produce qualification and products area. For Ala-Talkkari Oy, the 30 different candidate suppliers, they are

different scales, different models and different geographical areas from China.

As the subcontracting company service for Ala-Talkkari Oy, Yrityskehä Oy has to select different forms supplier for its customer to choose.

Hence, Yrityskehä Oy chooses 10-15 the suppliers from 30 candidate companies, according to their different scale, geographical area and qualification information.

The subcontracting company aims to submit customer different choices, so Yrityskehä Oy based on the suppliers' information select small to big scales factories; and they also located in different area of China, it will help Ala-Talkkari Oy to compare how the price different in different location.

Thirdly, send the drawing and requirement details to suppliers, and then ask for the quotation. After this step, actually it is a strict process. In this step, some of suppliers will be giving up. The reasons are different, such as the production capability, product process, price and so on.

Those suitable manufacturers will be in the second selection process. At then, the subcontracting company will meet with its customer. And the main company (Ala-Talkkari) will choose from all candidate companies, subcontracting company provides all information to main company does the choice.

Ala-Talkkari Oy selects 3 candidate suppliers finally from the 15 suppliers what Yrityskehä Oy provides to them.

The three suppliers are Dalian Richie industry company, Qingdao casting company and Ningbo Saivs Company. I would like to elaborate three suppliers' advantages and disadvantages, and evaluation of potential suppliers in Selection part of thesis.

Fourthly, when the company chooses several suitable companies, the process will go into on-the-spot investigation and evaluate the suppliers. For this case,

Yrityshehä Oy and Ala-Talkkari Oy professional person go to Chinese factories to visit and make an interview with them, and at the same time to make sure the quality, product capability and price.

Finally, if the Ala-Talkkari Oy makes its decision, the Yrityshehä Oy will also service them. Quality control, import from China issue, delivery, until Ala-Talkkari Oy gets their goods in Finland. The whole service will finished, and Yrityshehä Oy will get the commission from Ala-Talkkari Oy.

6.4 Selection of subcontracting

In this case, during the whole process of subcontracting, there is one tache is most important, selection.

Selection the subcontracting company, selection of suppliers, every selection plays important role.

Actually, for modern B-to-B subcontracting, the selection of supplier and initial evaluation should through internet and B-to-B portal website. The basic step should go to suppliers' websites to understand their products, and company information; then send the inquiries to them ask the cooperation; thirdly, go to do some research of suppliers' qualification and production ability; Fourthly, make sure the drawing with supplier, confirm that they can manufacture the products what the customer need. No doubt, the selection is very important part of whole subcontracting and purchasing process. Selection and evaluation are the key point of the international subcontracting service.

Subcontracting selection, the company needs to consider several aspects:

- a. Qualification. Evaluate the company's qualification is the first task needs to do. For the subcontracting company and suppliers, whether they have the good qualification and enough resources will become first point that will be

chosen.

- b. Professional resource. The company should professional enough, they can submit professional services for their customers, and they also need to have some special talents what their customers need but do not have.

So in this point, the quality control is important point.

In international trade or global business relationship, the quality control is the most important link in the whole business cooperation relationship.

Project Quality control means manage and control the project quality and process. This kind of management include that monitor the real situation of quality, project quality implement, quality standard comparison, project quality error and confirm problems, analysis of problems issue and correct the differences. The quality control is a kind of activities through the whole project and quality management.

The subcontracting company as the mid tache in the international business, it should have its own standard and method to control the quality. This just is one point of all service as one successful and mellow subcontracting enterprise. The quality control is the one point of many abilities of subcontracting, but it is also the most important. How to control the quality, and make sure it can match the customers' or buyers' requirement and standard level.

In many quality control issues, the subcontracting enterprise should choose the best way to control the product quality for their customers, it should promise the customers' benefit; it is subcontracting companies' first capability.

Yrityskehä Ltd bases its operation on the principles of sustainable development by taking into consideration the requirements set by the environment as well as health and safety issues. The most important criteria of operation, in addition to meeting the quality standards and customer's

expectations, are the effects of its products on the state of the environment. The quality and operational; system of Yrityskehä is audited by its main customers. The company is currently undergoing an expansion and development of the operations system, which aims to renew the quality system and continuously improve the state and level of their operation.

Its principle is to openly communicate its operations and to systematically gather feedback from customers and other stakeholders about its products and operation. The feedback is gathered not only by daily communication but with different customer surveys and stakeholder work.

Whatever, the quality control is very important for subcontracting enterprises. Their service should include in quality, control the quality does level can meet the customers' requirement, and it is the key for subcontracting companies' surviving and development.

In addition, subcontracting also can choose another way to control the quality; that is, buying service. It is related to another service relationship; but anyway, most of subcontracting can through this kind of cooperation to meet its customers' asking.

For example, we can still come back to the Ala-Takkari purchasing case. In this purchasing case, Ala- Takkari wants to purchase a huge quantity of casting from China.

As same as most of subcontracting enterprises, give the customers comprehensive service is the mainly principle, just like the Yrityskehä Oy's slogan --- one contact is enough. No doubt, its operation model likes from one point to all sides, the point is network of all-around and comprehensive professional services.

The professional personnel is the most important way to submit professional

services.

In Ala-Takkari purchasing program, how to control the quality is the task for whole purchasing project. Firstly, Yrityskeskä Oy has its own product quality manager to make sure the whole produce process, even this is the cross-broad deal, but the produce engineer can give the advice and information to the Chinese suppliers that what kind of processing the Ala-Takkari needs and how it can be. Secondly, when the whole producing is finished or the first sample finished, the subcontracting company will utilize its network to contact its cooperator in the manufacturers' location--- in this case, it is in China. Yrityskeskä Oy has some operators in China. Through this network, it is easy to buy the services from those cooperators in China. The cooperators can submit the quality engineer or the quality control service for it. It can save cost that the subcontract send the quality engineer to China; and at same time, it also can reach the aim to satisfy customers; quality standard. The subcontracting's operation can be through its own network and buy one professional service from another more professional cooperator in the special area, it will reach both saving cost and satisfying customer's need at the same time.

c. Service. Either subcontracting company or suppliers, they all have to have the ability of providing satisfied services for their customers. The service should be professional and comprehensive.

d. Price. The Price no doubt is the most important issue need to consider in every business. The company wants to get good quality products, comprehensive services, at the same time, the price should be reasonable.

6.5 Services of subcontracting

Of course, for different industry subcontracting enterprises, they have different kinds of services. Such as IT industry, they will provide the IT parts subcontracting and resourcing. This situation and operation method also can be used in other manufacturers of different industries.

For this case, Yrityshehä Oy is in the metal and machinery industry. So it service for machinery companies not only purchasing but selling and develop market. And its main service related with some metal and machinery area. In Yrityshehä, its service include: design and implementation, assemble, surface and heat treatment, welding, machining and procurement services.

Yrityshehä Oy and Ala-Talkkari is a kind of cooperation relationship, Yrityshehä Oy helps Ala-Talkkari Oy to look for suppliers in their target market, and evaluate the suppliers' qualification and production capabilities, utilize its professional resources to provide services for Ala-Talkkari Oy. This subcontracting service makes two companies form the subcontracting relationship, Yrityshehä Oy provides professional talent and resource, and it can understand target market better than Ala-Talkkari Oy; on the other hand, Ala-Talkkari Oy can focus on its core production, and purchase some casting components from China in reasonable price and good quality, it is obviously a good choice.

They have participated in the manufacturing of demanding and technically specialized machines in several customer projects. They also are able to take care of the project planning and implementation through our extensive network. The planning work for the projects is purchased separately through their networks as needed. They are able to offer services in customizing and assembly work in both welding and final assembly. They can also handle pneumatics, hydraulics and electrical work during the assembly in needed. Surface treatment is a natural part of their services and also necessary

post-weld annealing and other more demanding heat treatments (gas carburization, hardening, tempering, normalization and nitration are included in their complete deliveries.

In the subcontracting company, the purchasing service is the most important service item. Certainly, the Yrityskeskä Oy also provides the purchasing service, just like in Ala-Takkari case. For subcontracting enterprise, the procurement services are the foundation on which the current operation of Yrityskeskä is built, its procurement services bring added value to its customers by increasing the efficiency of the procurement process and effectively delivering from single parts to extensive, comprehensive solutions or systems. They are constantly seeking new suppliers or manufacturers to be able to meet the customer needs as extensively as possible.

Therefore, according to the example of subcontracting enterprise like Yrityskeskä Oy, it is the part of whole international B-to-B market and trade. It makes big role between the international buyer and sellers. The subcontracting as the middle and important tache in the whole international purchasing process, it provides comprehensive service for their customers. So no doubt, the subcontracting will become the mainly method of international service and trade in the future for global economic development.

7. Choosing casting services subcontractor from China

In this case, for three potential suppliers, I would like to elaborate and analyze the selection of Ala-Talkkari Oy. The three potential suppliers are Dalian Richie industry company, Qingdao Changrong casting company and Ningbo Saivs Company.

For these three totally different suppliers, the advantages and disadvantages are very obviously.

A. Dalian Richie Industry Company.

This is a small scale factory, it located in east-north of China. In this area, the produce cost is low in heavy and metal industry; the delivery, from Dalian harbor to Helsinki, the freight cost is 2000 USD per container.

This supplier's quotation is the cheapest one in all of suppliers, and after the interview, the quality can be controlled well, but company's scale is about 50 people, it is private enterprise. It has this kind of production experience, however, for the first time cooperation, it needs to consideration more.

B. Qingdao Changrong Company.

This is a group company; the whole group involves several different companies for different production and manufacturing. The scale of Changrong Company is larger than first one. The geographic, it located in North area also, the geography is very near to first one, and also it is harbor city, so it is easy to deliver to Finland, the cost of delivery is around 2300USD per container. However, the quotation of this company is higher than first one; just two parts' price can compete with Dalian Richie Company. Because it is a group enterprise, the scale and production capability are better than first one. Its best advantage is that this company has cooperation experience with one Finnish company; so no doubt, it is easy to trust them and operate with them.

C. Ningbo Saivs Company

This supplier located in South of China, so the production cost will be higher than others. Obviously, their quotation does not have any advantages; the quotation is highest one among three potential suppliers, it is higher 50% and 40% separately than others.

At same time, the location decided that the delivery cost will be higher, from Southern harbor to Helsinki; the freight is about 3000-4000 USD per container. Of course, Saivs is the most professional factory among three companies, and also it is the largest scale company. Obviously, its production capability and quality is the best one, it has very strict quality control system and its own process for production. For first cooperation, it is more believable not only in production scale but quality and honor.

Therefore, selection of subcontracting is the key tache in the whole processing; choose the right partner will help to establish a successful and long-term co-operation relationship. So for these three quite different potential suppliers, evaluation and selection suppliers based on their advantages and disadvantages is final work before make purchasing.

8. Conclusion

With the increasing development of economy development, the internationalization is more and more active in the whole world market. One enterprise wants to get absolute advantages to develop or improve its business; it should focus on its own most professional area that is the core business in the whole enterprise. So the subcontracting appears under this environment, it develops with the need of economy and business globalization. The internationalization develops in one level, subcontracting should be needed in the whole macro environment.

The appearing of international subcontracting enterprise can help the business who wants to develop its business abroad or who needs to focus to its own core business. The subcontracting will through its network and professional resources help its customers to reach their demands. In the global area, the international subcontracting also can submit or search the different resources what the customers wants and needs.

According to the development of international trade, especially in the B-to-B market, the subcontracting as the part of international trade should play its important roles. More and more subcontracting enterprises are built and developed; they will make the whole subcontracting market more flourish. Out of question, the international trade will developed faster and better based on the subcontracting enterprises' services. It will help economic globalization and B-to-B market improvement.

No doubt, the international subcontracting will be the most important part not only in international trade, but also in global B-to-B market.

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